Human OMgp Biotinylated Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: BAF1673

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human OMgp in Western blots. In Western blots, approximately 60% cross-reactivity with recombinant mouse OMgp is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human OMgp Ile25-Asn420 Accession # P23515
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Human OMgp (Catalog # 1673-OM)

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Oligodendrocyte myelin glycoprotein (OMgp or OMG), Nogo, and myelin-associated glycoprotein (MAG), are three myelin-derived axon outgrowth inhibitors that collapse axonal growth cones and inhibit neurite outgrowth (1-3). These three structurally distinct proteins contribute to the myelin-associated inhibitory activity that prevents axonal regeneration after injury of the adult central nervous system (CNS). Human OMgp cDNA encodes a 440 amino acid (aa) residue glycosylphosphatidylinositol (GPI)-anchored protein that has a 24 aa signal peptide, eight leucine-rich repeats (LRR) followed by five serine/threonine-rich repeats (4). OMgp has multiple potential N-glycosylation and O-glycosylation sites. Mouse and human OMgp share approximately 88% aa sequence identity. OMgp is expressed on the surface of oligodendrocytes and on large projection neurons, including Purkinje cells of the cerebellum, pyramidal cells of the hippocampus, motoneurons of the brainstem and anterior horn cells of the spinal cord (5). The neurite outgrowth inhibitory activities of all three myelin-derived proteins are mediated by binding to a common receptor complex consisting of the Nogo receptor (NgR) and the p75 neurotrophin receptor (NGFR) (2, 3). Besides its function in the inhibition of axonal growth, OMgp has also been implicated in the inhibition of proliferation. Although the transmembrane receptor that mediates the proliferation inhibition activity has not been identified, the LRR repeats of OMgp were shown to be essential for both the proliferation inhibition and neurite outgrowth inhibition activities (6).

References:

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4. Mikol, D.D. *et al*. (1990) J. Cell Biol. **111**:2673.
5. Habib, A. *et al*. (1998) J. Neurochem. **70**:1704.
6. Vourc'h, P. *et al*. (2003) J. Neurochem. **85**:889.

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